4.6 General Form of the Equation for a Linear Function

Recall from previous classes the different ways to represent the equation of a line:

1. Slope Intercept Form is _____ where "m"=_____ , "b"=_____
2. Slope Point Form is _____ where "m"_____ and you have a point _____

Today we will show you another way to express the equation of a linear function

3. **GENERAL FORM:**_____

Where A is a positive whole number, and B and C are integers

How do we derive that formula?

Example 1: Find the equation of a line with a slope of 4 that passes through the point A(2,5). Do this by *finding the slope intercept form first, then ending with the general form.*

a) Write the equation in slope-point form

b) Write the equation in slope intercept form

c) Write the equation in standard form.

d) Find the x-intercept of this line.

Example 2:Rewriting an Equation in General Form
Write each equation in general form.

a) $y = -\frac{2}{3}x + 4$

b) $y - 1 = \frac{3}{5}(x + 2)$

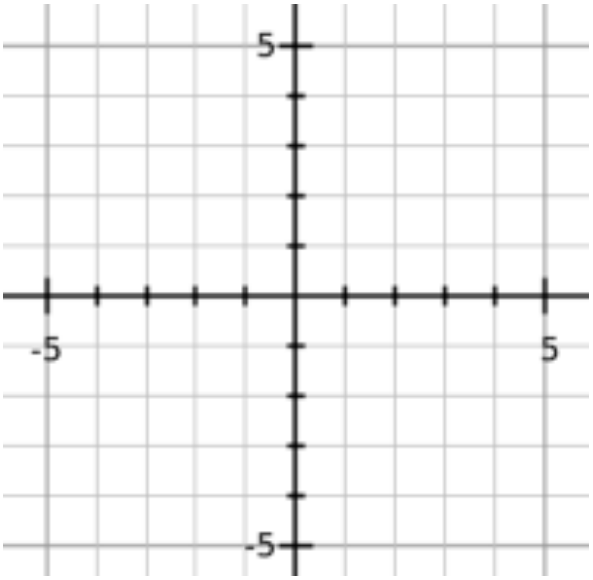
Example 3: Find the equation of a line with slope $-\frac{2}{3}$ that passes through the point (-3,9). Write your final answer in general form. Use whatever method you wish.

Example 4: Find the equation of a line that passes through the points R(1,5) and T(2,-1). Write your answer in slope-point form and then in general form.

Example 5: Graph out the following equations written in general form by rewriting these equations in slope-intercept form.

a) $6x - 2y + 2 = 0$

b) $4x - 5y = 0$



Practice-Pg 384
4-6, 8, 12-14, 17, 18, 22, 24